AMENDMENTS TO THE CLAIMS

Listing of claims:

This listing of claims replaces all prior versions and listings of claims in the application.

Claim 1 (Currently amended): A nonlinear controller comprising: a first module composed of a nonlinear system for creating a synchronous state with a controlled object through a nonlinear interaction with the controlled object; and

a second module composed of a feedback system for adjusting a parameter to vary a relation value of the first module relating to the synchronization with the controlled object based on [[the]] a difference between the relation value and a target relation value, wherein the controlled object is controlled by convergence of the relation value relating to the synchronization of the first module to the target relation value, and

the first module vibrates at different natural frequencies from the controlled object, and the nonlinear interaction has an entrainment effect.

Claim 2 (Cancelled)

Claim 3 (Currently amended): The nonlinear controller as recited in Claim [[2]] 1, wherein the relation value relating to the synchronization is [[the]] a phase difference between [[the]] a vibration of the controlled object and [[the]] a vibration of the first module, and [[the]] a parameter is the natural frequency of the first module.

Claim 4 (Previously presented): The nonlinear controller as recited in claim 1, wherein the synchronous state between the first module and the controlled object is achieved through transmission and reception of rhythm.

Claim 5 (Cancelled)

Claim 6 (Previously presented): The nonlinear controller as recited in Claim 3, wherein the synchronous state between the first module and the controlled object is achieved through transmission and reception of rhythm.

Claim 7 (Previously presented): The nonlinear controller as recited in Claims 1, wherein the synchronous state between the first module and the controlled object is achieved through a radio wave or network.

Claim 8 (Cancelled)

Claim 9 (Previously presented): The nonlinear controller as recited in Claim 3, wherein the synchronous state between the first module and the controlled object is achieved through a radio wave or network.

Claim 10 (Previously presented): The nonlinear controller as recited in Claim 4, wherein the synchronous state between the first module and the controlled object is achieved through a radio wave or network.

Claim 11 (Cancelled)

Claim 12 (Previously presented): The nonlinear controller as recited in Claim 6, wherein the synchronous state between the first module and the controlled object is achieved through a radio wave or network.

Claim 13 (Currently amended): A nonlinear control method comprising ~~steps of~~: creating a synchronous state with a controlled object through a nonlinear interaction with the controlled object;

acquiring a state variable relating to [[the]] a dynamic behavior of the controlled object;

adjusting a parameter for varying a relation value relating to the synchronization with the controlled object based on [[the]] a difference between the relation value relating to the synchronization and a target relation value; and

creating a new synchronous state with the controlled object using the adjusted parameter.

Claim 14 (Previously presented): A program readable by a controller for causing the controller to perform the nonlinear control method as recited in Claim 13.